# BULLETIN

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# CHICAGO ACADEMY OF SCIENCES

NEW AND LITTLE KNOWN PSELAPHIDAE (COLEOPTERA) FROM BRAZIL, COLOMBIA AND MEXICO, WITH KEYS TO MEXICAN GENERA AND SPECIES

 $\mathbf{BY}$ 

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#### Introduction

The pselaphids discussed in this paper come from three sources. Those from Matto Grosso, Brazil were given to me by Dr. H. F. Strohecker of Ohio University; those from Colombia were presented by Henry Dybas of the Chicago Natural History Museum; the specimens from Mexico were sent recently by Dr. M. J. Sanderson of the Illinois State Natural History Survey. I wish to thank these gentlemen for their gifts. Types of new species described in this paper are in the collection of the author.

The material from Mexico is of especial zoögeographic interest since the majority of the specimens were collected near Acapulco and hence present a partial answer to certain questions asked earlier (Park, 1942, 1943) concerning the pselaphid fauna of the Pacific coastal region of Mexico. This general question is discussed later in this report.

The new records and new species described here bring the total to 919 species known from the Neotropical Region. Of this number, Brazil now has 358, Colombia has 62, and Mexico has 134 species and infraspecific categories known at present.

#### I. BRAZIL

## Decarthron (Decarthron) uveum new species

Type male. Measurements: head 0.23 x 0.35 mm.; pronotum 0.33 x 0.37 mm.; elytra 0.53 x 0.74 mm.; abdomen 0.40 x 0.74 mm.; total length 1.5 mm.

Dark reddish-brown, shining, with moderately abundant, moderately long (0.067 mm.), subdecumbent pubescence; punctulation very sparse and minute.

Head with prominent, coarsely faceted eyes four times as long as obsolete tempora; eyes subcircular from lateral view and composed of about 38 large, convex facets. Vertex with a pair of large foveae; each fovea as large as an ocular facet and set in a deep depression; foveae on a line through third row of ocular facets and each nearer an eye than to each other; foveae not united by an interfoveal sulcus, but each with a slightly oblique evanescent impression which extends anteriorly to near an antennal base. Antennae relatively long (0.70 mm.), ten-segmented, abnormal, with shape and relative proportions of segments as illustrated (Pl. II, 1); widely separated by the perfectly simple and declivous front; each antenna beneath a rather prominent tubercle which is elevated and obliquely ovoidal; each tubercle bears a large, oblique, ovoidal fovea which is as long as three ocular facets united and appears to be a displaced homologue of the more usual postantennal incisure so common in the genus; the mesial wall of each tubercle largely forms the impression of each vertexal fovea noted. Clypeus simple; labrum simple; right mandible crossed dorsal to left mandible; ventral surface of head normal for genus; maxillary palpi normal for subgenus.

Pronotum with a simple base, with a free, minute, punctiform fovea at basal fifth; no lateral foveae.

Elytra with rounded humeri; each elytron with two basal foveae, the inner at base of entire, deep sutural stria and the outer at base of a discal impression which does not reach the middle of the elytral length; elytral flanks simple.

Abdomen with five tergites in a length ratio of 5/1.5/1/1/1 with the first strongly, narrowly margined and provided with a pair of

strong, slightly arcuate basal carinae; these carinae half as long as segment but unusually widely separated by more than one-half the total segmental width. Five visible sternites in a length ratio of 3.5/0.1/0.2/0.4/1 with the last two modified: fourth with the median third of its apical margin abruptly elevated into a short, medianly interrupted ridge; fifth sternite medianly elongated and coarsely punctate.

Metasternum peculiar, medianly flattened with this portion densely covered with short, matted pubescence; sternal foveae IV and V very large and densely setose.

Tarsi normal for genus. Anterior femur strongly inflated medianly in the dorsoventral axis to give a sharply angulate outline, and with an alutaceous elongate-fusiform impression on the dorsal face between the high median angle and the distal end of femur. Intermediate femur strongly dilated medianly in the dorsoventral axis, with a small excavation on the dorsoposterior area which is subreniform from above; a short, oblique tooth just distal of the high median angle; the distal part of the femur very oblique; these peculiarities illustrated (Pl. II, 3). The intermediate tibia with a strong patch of setae near apex on ventral face.

Described on a single male (the type) from Corumba, Matto Grosso, Brazil. Group VI of the genus.

## Decarthron (Decarthron) rudigenus new species

Type male. Measurements: head 0.23 x 0.30 mm.; pronotum 0.27 x 0.32 mm.; elytra 0.37 x 0.60 mm.; abdomen 0.33 x 0.56 mm.; total length 1.20 mm.

Yellowish-brown, shining; integument nearly impunctate save for scattered, coarse punctures on elytra; pubescence longer than in uveum.

Head with short obsolete tempora and prominent eyes as in uveum. Vertex with a pair of foveae placed as in uveum, these foveae free, each much smaller than an ocular facet but appearing large as a consequence of the circular depression in which each is situated. A second pair of foveae, also free, on a line through antennal bases; these foveae relatively large, each as large as an ocular facet and each set in an oblique, oval depression. Each side of head with a well developed postantennal incisure so typical of the subgenus. Therefore the top of the head appears sexfoveate, the postantennal incisure, anterior oval, and interocular fovea of each side arranged in a triangle. Clypeus long, gently declivous; labrum simple; right mandible crossed dorsal to left mandible; ventral surface of head as for genus; maxillary palpi as for the subgenus. Antennae relatively short (0.57 mm. long), tensegmented, abnormal, with segmental proportions and shapes as illustrated (Pl. II, 2).

Pronotum subglobular, with a large (diameter of an ocular facet), free, median fovea at basal fifth. No lateral foveae and basal margin not punctured.

Elytra with rounded humeri and simple flanks; each elytron with two basal foveae, the inner at base of entire sutural stria and the outer at base of an arcuate discal impression which is half the elytral length.

Abdomen with five tergites in a length ratio of 4/1/1/1 with the first laterally margined as usual and with a pair of arcuate basal carinae which are half the segmental length and are basally separated by half the segmental width. Five sternites in a length ratio of 3.5/0.4/0.2/0.1/0.5 with the last slightly tumid.

Metasternum rather tumid and medianly lightly, longitudinally impressed. Legs relatively simple, with normal tarsi; none of the femora are inflated and the only abnormality is a slender spine on the dorsal face of the intermediate femur, as illustrated (Pl. II, 4).

Described on a single male (the type) from Corumba, Matto Grosso, Brazil. Group VI of the genus.

Both of these Brazilian species are distinct from previously described *Decarthron*. They may be isolated from their allies (Group VI males having the fourth antennal segment swollen and hence distinctly wider than the third or fifth segments) by the following key:

- 3 Minute, not more than 1.16 mm. long; vertex with a pair of interocular foveae connected by a shallow, irregular ogival impression which anteriorly touches a pair of minute frontal pits; male antennae with segments VII and VIII very short and very transverse; Amazon River basin, Brazil.....

Size larger, 1.4 to 1.5 mm. long; antenna of male with segments VII and VIII longer, less transverse.....

4 Antennal segment III small and as wide as long; IX slightly transverse; intermediate femur strongly dilated medianly, this swelling armed with a spine and excavated, the excavation bearing two prominent, parallel carinae, and the femur suddenly very narrow and pedunculate distal to the excavation,

#### II. COLOMBIA

## Decarthron (Decarthron) bolivari new species

Holotype male. Measurements: head 0.18 x 0.31 mm.; pronotum 0.27 x 0.33 mm.; elytra 0.43 x 0.60 mm.; abdomen 0.47 x 0.53 mm.; total length 1.35 mm.

Light reddish-brown with antennae, palpi and legs light yellowish-brown; integument sparsely clothed with moderately long (0.067 mm.), subdecumbent golden pubescence. Punctation of head limited to a few coarse punctures on frontal extension, and mesiad of each eye; pronotum and abdomen distinctly punctate; elytra with coarser, sub-asperate punctures.

Head (Pl. I, 5) with large prominent eyes, each with about 30 coarse facets, nearly twice as long as tempora, nearly circular from lateral view. Vertex rather high medianly, slightly sulcate near occiput, sloping to frontal extension; quadrifoveate, with one pair of large vertexal foveae and a more anterior, shallower pair of frontal foveae just mesiad of the postantennal incisure, surface broadly convex between these frontal foveae. Front horizontally produced between antennal bases as a trapezoidal process; this extension overhangs the simple clypeus, and, when seen apically, it appears as an oval depression with sharply carinated border which holds a row of mesially-directed setae; labrum simple; right mandible crossed dorsal to left mandible. Ventral surface of head typical of genus, with an elongate-oval, median fossa with sharply carinated border. Maxillary palpi typical of subgenus; first segment minute; second curcurbitoid, basally arcuate, apically moderately inflated; third wider than second, subtriangular, as wide as long with convex outer and angulate inner face; fourth (last) segment slightly wider than third, obliquely truncate at base, apically subacute, with a minute palpal cone at apex.

Antennae ten-segmented, geniculate, abnormal; segment I dorsally subquadrate; II subovate; III symmetrically obconical; IV to VIII forming an arc, fourth swollen on mesial face and distinctly wider than third or fifth, fifth submoniliform with mesial face slightly

swollen, sixth longer than wide and narrower than fifth with mesial face subangulate, seventh distinctly transverse with mesial face produced, eighth very transverse and twice as wide as long with the mesial face strongly and subacutely produced which causes this segment to be slightly wider than tenth segment; IX regularly trapezoidal, as wide as long; X basally truncate, apically inflexed and subacute with a finely pubescent and sharply defined depression occupying apical third of ventral face.

Pronotum rounded-hexagonal with a sharply defined, deep, circular, median fovea at basal fourth; basal margin simple.

Elytra with rounded humeri. Each elytron with two deep basal foveae, simple flank, entire sutural stria and a striaform discal impression extending to middle of length.

Abdomen with five tergites in a length ratio of 4/1/1/1/2, the first three margined, the first with a pair of arcuate basal carinae one-half segmental length and separated by one-half segmental width. Five visible sternites in a length of ratio of 3/0.2/0.3/0.5/0.5.

Metasternum broadly concave.

Anterior legs: trochanters and femora simple, the latter not inflated or modified; tibiae with an apical appendage (Pl. I, 6) arising beneath first tarsomere (I am unable to discern whether this strange structure is morphologically part of tibia or tarsus); tarsi as illustrated (Pl. I, 6).

Intermediate legs; trochanters and tarsi simple; femora strongly, abnormally modified as illustrated (Pl. I, 7, 8, 9); tibiae with a short laminoid tubercle, bearing setae, at apical seven-ninths of ventral face (Pl. I, 9).

Posterior legs simple.

Allotype female and paratype female as for holotype save that (1) the front is normally declivous between antennal bases, (2) antennae simple, (3) tergites 4.5/1/1.5/1/1.5, (4) sternites 3.5/1/0.2/0.8/0.5, (5) legs simple. It should be noted that the metasternum is broadly concave in both sexes.

Described on three specimens, collected by Henry Dybas at light on the night of August 13, 1938, at Puerto Berrio, Colombia, and named in honor of Simon Bolivar.

This new species and *frontale* Raffray are the only pselaphids in Group XIV. They have many structural points in common and are taxonomically allied in addition to their known zoögeographic range. The truncated frontal extension between the antennal bases serves to isolate them from other members of this large and complex genus.

Decarthron frontale Raffray differs from bolivari in that (1) the dorsal surface of the head is trifoveate, (2) antennae with segment III triangularly obconical, IV and V of the same width, VI as wide as long, (3) anterior femora slightly swollen, and (4) the modifications of the intermediate femora are entirely different. This latter species was described on the male sex, with the habitat given as Colombia. On described and illustrated anatomy, these two species are very different, but I am unaware of the range of normal variation in either; in time, with accumulation of a representative series, bolivari may prove to be an infraspecific portion of the frontale population or it may be found to be genetically distinct.

## Hamotus (Hamotus) clavicornis Reitter (1882)

This species was originally described from Venezuela, and has not been recorded since. I have a specimen collected by Henry Dybas at Cali, Colombia on June 30, 1938 at 3000 feet elevation, which extends the range of the species.

## Hamotus (Hamotoides) veracruzensis fletcheri Park (1942)

This subspecies was described on the Panama Canal Zone population. New material extends its range southward. I have four males collected by Henry Dybas as follows: two on July 11 and one on July 21, 1938 from Villavicencio, Colombia and one on July 29, 1938 from Puerto Salgar, Colombia. These Colombian specimens are consubspecific with the Panamanian population, as the aedeagus was compared in both series at high magnification and found to be identical, even to the number and position of setae on the lateral lobes. The aedeagus of fletcheri (Pl. I, 1, 2) is the most primitive genital apparatus so far described in Tyrini. It is essentially bilaterally symmetrical, with well formed lateral lobes. It compares more favorably with the Nearctic Ceophyllus and Tmesiphorus rather than the Nearctic Cedius (Park, 1942).

Fletcheri has four neotropical allies with similar group characteristics, and may be quickly separated from these latter by the following details: bellus (Schaufuss) of Brazil and Paraguay has no median pronotal fovea, the transverse sulcus being merely slightly wider medianly; hilaris Schaufuss of Colombia has the elytra wholly impunctate; flavopilosus Raffray of Venezuela has antennal segments IV to VIII all equal in width and all transverse; reichei Raffray of Venezuela has antennal segments IV to VI transverse and VII to VIII lenticular. This last species, unknown to me, was based on a single specimen, which is probably a female, and the male secondary sexual characteristics are not yet known.

#### III. MEXICO

## Decarthron (Decarthron) profemoralis new species

*Holotype male.* Measurements: head  $0.30 \times 0.20$  mm.; pronotum  $0.35 \times 0.40$  mm.; elytra  $0.56 \times 0.74$  mm.; abdomen  $0.44 \times 0.74$  mm.; total length 1.65 mm.

Dark reddish-brown, shining, with long, sparse, light brown pubescence.

Head long, rounded-triangular, with prominent, coarsely-faceted eyes; eyes four times the length of tempora. Vertex simply convex, with a pair of large vertexal foveae on a line passing through eye-centers; each vertexal fovea as large as an ocular facet. Front simply and slightly declivous, merging evenly into the simply convex, steeply declivous clypeus. Labrum medianly and transversely tumid. Mandibles large, left crossed dorsal to right. Maxillary palpi as for subgenus. Ventral surface of head as for genus, bearing the characteristic oval fossa with sharply carinated margins.

Antennae ten-segmented, distantly articulated at base, normal; segment I slightly longer than wide (0.067 mm. long); II slightly shorter than first, slightly longer than wide; III as long as first, obconical; IV, V, VI subequal, subovoidal, shorter than third; VII, VIII, IX regularly trapezoidal, as long as wide, regularly increasing in both length and width from seventh to ninth; X slightly longer than eighth and ninth united, 0.134 mm. long, wider than ninth, truncate at base, bluntly acute at apex, ventral face sinuate in apical half, the sinuation densely pubescent.

Pronotum with only a single antebasal fovea; this fovea nude, circular, with a diameter equal to two ocular facets.

Elytra with simple flanks; each elytron with two large, nude basal foveae, the inner at base of a deep, entire sutural stria, the outer at base of a discal impression extending half elytral length.

Abdomen with five tergites in a length ratio of 5/1.5/1.4/1/1. First tergite with a pair of subparallel, slightly arcuate, discal carinae, separated by slightly less than half the segmental width, and extending for half the segmental length. Five sternites in a median length ratio of 4.5/0.25/0.25/0.4/0.5, with the fifth medianly tumid.

Legs with tarsi as for genus, and all legs simple save the anterior femora. The anterior femora are novel: each is suddenly expanded in the dorsoventral axis and compressed in the anteroposterior axis, in distal fourth of length, to form a subcircular, tumid, coarsely punctate area beset with numerous, short, stiff setae (Pl. II, 7).

Allotype female. Similar to holotype save that (1) the fifth sternite is coarsely punctate, medianly tumid, and is twice as long at the

fourth sternite, and (2) the legs are perfectly simple, lacking the striking abnormality of the anterior femora.

Described on five specimens (holotype male, allotype female, two paratype males, one paratype female) collected by L. J. Lipovsky at light on the night of August 18, 1938 at Acapulco, Guerrero.

This species does not fit any of the known groups of neotropical *Decarthron*. Raffray separated the genus into fifteen species groups in 1904. Subsequently Park (1942) placed groups I to XIV in the subgenus *Decarthron*, and group XV in the subgenus *Decarthros*. The new species, *Decarthron profemoralis*, must be allocated to a new group (Group XVI) in the subgenus *Decarthron*.

The characteristics of the new group XVI may be tabulated as follows: (1) front of head simply declivous between antennal bases; (2) pronotum with no lateral foveae, but with a single, median antebasal fovea, and the base lacking a row of sharply-cut punctures; (3) antennae not abnormal in either sex, the intermediate segments being subequal and subovoidal; (4) posterior tibiae simple, and not inflated in either sex; (5) intermediate femora simple, not abnormal in either sex; (6) anterior femora abnormal in the male sex.

Within this group diagnosis the combination of normal antennae, normal intermediate femora and abnormal anterior femora in the male sex is diagnostic for practical purposes. Furthermore, the abnormality of the male anterior femora is qualitatively different from the subapical excavation of anterior femora of males in certain other groups. In these latter the intermediate femora are usually extravagantly modified, and the anterior femora of such males are often medianly dilated in the dorsoventral axis, and have a scar or excavation on the apical declivity of this femoral dilation. Such a scar is usually glabrous, or more uncommonly granulated; is of variable size and of variable form (circular, oval or oviform); and lies on the dorsal or dorsoanterior femoral face. On the other hand, in males of Group XVI the anterior femora are not dilated medianly, lack this distinctive excavation, and the apical end of the femur is suddenly swollen on the anterior face, as previously described, appearing as a diminutive pin-cushion.

## Decarthron (Decarthron) sandersoni new species

Type male. Measurements: head 0.30 x 0.40 mm.; pronotum 0.33 x 0.33 mm.; elytra 0.60 x 0.74 mm.; abdomen 0.34 x 0.67 mm.; total length 1.57 mm.

Light brown, shining, with moderately long, moderately abundant, lighter brown pubescence.

Head rounded-trapezoidal, with prominent, coarsely-faceted eyes four times as long as tempora. A pair of large, nude vertexal foveae

on a line through the second row of ocular facets; each fovea 0.03 mm. in diameter, and larger than an ocular facet. Front, clypeus, labrum and mandibles as in *profemoralis*. Maxillary palpi as for subgenus. Ventral surface of head as for genus.

Antennae ten-segmented, distantly articulated, abnormal; segment I longer than wide, 0.067 mm. long; II shorter than first, subquadrate; III as long as first, obconical; IV and V subequal in length and width, subobconical, each shorter than third and slightly longer than wide; VI and VII abnormal, distinctly wider and slightly longer than fifth, each subquadrate from a dorsal view but distinctly transverse from a mesial view (this is a consequence of their dorsal faces being swollen to form a tumid process which is subacute at mesioapical angle, and since their lateral faces and ventral faces are normally convex, the segments are asymmetrically articulated); III subquadrate from dorsal face, distinctly transverse from the mesial face, but mesially narrower than either the sixth or seventh; IX slightly wider than seventh and slightly narrower than eighth mesially, regularly subquadrate; X as in profemoralis, 0.15 mm. long, distinctly longer than preceding two segments united.

Pronotum subglobular with no lateral foveae; a median antebasal fovea present, this being nude, with the diameter of an ocular facet.

Elytra as in profemoralis.

Abdomen with five tergites in a length ratio of 4/1.5/1/1/1 with first tergite bearing a pair of discal, divergent carinae, half the segmental length and separated by slightly less than three-fifths the segmental width. The tergites narrowing rapidly from first to fifth, with the latter being obtusely triangular from a dorsal view. Five sternites in a median length ratio of 3.5/0.2/0.25/0.2/1.25. The fifth sternite obtusely triangular; deeply, medianly impressed in basal half and tumid in apical half.

Legs with trochanters, tibiae and tarsi normal. Anterior femora slightly swollen on dorsal face, bearing an oviform, glabrous excavation in distal two-fifths. Intermediate femora dorsoventrally expanded, the dorsal face being medianly angulate; this expanded area laterally asymmetrically compressed, with a broad excavation on anterior face extending nearly to ventral face, and the posterior face with a less extensive, sharply angulate excavation ending in a nearly vertical sulcus in apical fourth; the carinoid ridge, formed between these two excavations, oblique and medianly erected in an angular process. Posterior femora normal.

Described on one male (the type) collected by L. J. Lipovsky at light on the night of August 18, 1938 at Acapulco, Guerrero. I take pleasure in naming this distinctive species for my friend Dr. M. J.

Sanderson. It is a member of Group VI and within this group is most closely allied to *quadrifoveatum* Fletcher (1928, p. 222). From this latter species it differs in numerous details. *Quadrifoveatum* has antennal segment VI subovate and subequal in width to IV and V and the intermediate male femora have both the apical and basal edges of the excavation armed with a truncate spine.

## Decarthron (Decarthron) punctatum Fletcher (1928)

Originally described on six males taken December 19, 1926 at light from Veracruz, Veracruz; it has not been reported since.

It is pleasant to record it again, and from the Pacific side of Mexico. My specimen is a male collected by L. J. Lipovsky at light on the night of August 28, 1938 at Acapulco, Guerrero.

## Decarthron (Decarthron) lipovskyi new species

Holotype male. Measurements: head 0.23 x 0.33 mm.; pronotum 0.29 x 0.33 mm.; elytra 0.47 x 0.60 mm.; abdomen 0.40 x 0.56 mm.; total length 1.4 mm.

Light brown, shining; pubescence lighter brown, subprostrate, moderately long and abundant.

Head transverse-trapezoidal with prominent, coarsely-faceted eyes four times as long as tempora. Vertex strongly convex, with a pair of deep, circular, nude vertexal foveae on a line through the second row of ocular facets; each fovea with the diameter of an ocular facet, and located on the declivous apical area of the convex vertex, each fovea nearer the adjacent eye than to each other. The usual post-antennal incisure well-developed. Front simple, gently declivous between small antennal tubercles, with a distinct fovea impression mesiad of each tubercle. Clypeus steeply declivous, at nearly right angles to vertex, simple. Labrum transverse, tumid, with arcuate distal margin. Mandibles relatively small, left crossed dorsal to right. Maxillary palpi as for subgenus. Ventral surface of head as for genus.

Antennae ten-segmented, distantly articulated, normal; segment I elongate (0.067 x 0.04 mm.); II as wide as first, quadrate; III obconical, longer than second, slightly shorter than either first or ninth; IV, V, VI subequal, ovoidal, slightly shorter and slightly wider than third; VII slightly shorter than sixth, transverse-trapezoidal; VIII larger than seventh, transverse-trapezoidal; IX quadrate, larger than eighth; X as long as preceding three united, wider than ninth, obliquely subacute apically and truncate basally, with the usual pubescent sinuation on ventral face in apical third.

Pronotum transverse-trapezoidal, with no lateral foveae, but with a single median antebasal fovea having a diameter of two ocular facets.

Elytra coarsely punctate, with simple flanks; each elytron as in profemoralis.

Abdomen with five tergites in a length ratio of 4/1.25/1/1/1 with first having a pair of arcuate-divergent discal carinae half the segmental length as a whole (two-thirds the segmental length at their location) and separated by half the tergite width at their apical ends. Fifth tergite coarsely punctate. Five sternites with a median length ratio of 4/0.2/0.2/0.4/0.5 with the last two subvertical and hence at a different plane from the preceding three, the last tumid.

Wings very well developed, 1.7 mm. long.

Legs with simple trochanters. Anterior femora dilated dorsoventrally, with dorsal face deeply and abruptly sinuate in distal half. Intermediate femora dilated dorsoventrally, with dorsal face deeply and abruptly sinuate in distal half, the sinuation excavated on the dorsoposterior face, with a strong spine at basal end of excavation, but no spine at apical end of excavation (separating this species from denticulatum), and no irregularity or process on carinoid ridge of excavation (separating this species from vulneratum); a laminoid, triangular tooth at ventral limit of excavation far down on posterior face and nearly beneath the apical spine (Pl. II, 6). Posterior femora simple. Tibiae not inflated; anterior with an apical spatulate process; intermediate with a short apical spine; posterior with a spicular apical spine. Tarsi as for genus.

Allotype female as for holotype in essential details, save that the anterior and intermediate femora are entirely simple.

Described on four males (holotype and three paratypes) and two females (allotype and paratype) collected at light on the nights of August 18 and 28, 1938 at Acapulco, Guerrero by L. J. Lipovsky, in whose honor this species is named. This addition to the Pacific coast fauna of Mexico is a member of Group IX. It is most closely resembled by vulneratum Raffray (1904, p. 192, fig. 82) but the latter has entirely different basal abdominal carinae, and the excavation of the male intermediate femora is qualitatively different. It also resembles denticulatum Fletcher (1928, p. 224, fig. 26) of Group VIII but the latter has both apical and basal ends of the male intermediate femoral excavation spined.

# Decarthron (Decarthron) fractifrons Fletcher (1928)

Originally described on eight males and twelve females taken on December 19, 1926 at light from Veracruz, Veracruz; it has not been reported since.

I am pleased to record this distinctive species again, and from the Pacific side of Mexico. I have one male collected by L. J. Lipovsky at light on the night of August 28, 1938 at Acapulco, Guerrero.

Fletcher says of the variation within this species population (1928, p. 218) "The protuberance on the undersurface of the first antennal segment varies considerably in the material before me. In the type it is distinct, but in other males it becomes less distinct, while in a few it is entirely wanting."

The Acapulco male has the process, arising from the ventral face of the first antennal segment, developed into a truncate, slender tubercle (Pl. II, 5) and, in this accentuated form of this character, joins the type at the extreme right of a curve depicting normal variation of this structure in *fractifrons*.

Since the type came from the Atlantic side and the Acapulco male from the Pacific side, the very small amount of evidence at hand (nine males) is against subspeciation in *fractifrons* on the two sides of the Central Mexican Plateau. Again, since the species is not known outside of Mexico, there is no evidence to show whether the population has dispersed from either side through the Tehuantepec Isthmus from a Mexican center, or has spread from a more southern center northwards along each coast and hence isolated by the inland mountain masses. That *fractifrons* occurs on both coasts, between 20° and 16° North Latitude, in both instances represented by an infraspecific population having the same general acute development of a structural character which is known to be highly variable, is all that can be suggested at this time.

## Reichenbachia mexicana Raffray (1904)

This easily recognized species was described as coming simply from "Mexico" and after half a century it is a pleasure to give it a more definite locality. I have a male taken at light on the night of August 28, 1938 by L. J. Lipovsky at Acapulco, Guerrero.

# Reichenbachia bifoveata Fletcher (1928)

This species was described on three males and five females taken at light on December 19, 1926 at Veracruz, Veracruz. It has not been recorded since its description.

It can be ascribed to the Pacific coastal region as well. I have a female from Acapulco, Guerrero, collected at light on the night of August 28, 1938 by L. J. Lipovsky.

## Reichenbachia reichei (Schaufuss) (1872)

In view of the inadequacy of the ancient original description by Schaufuss (1872, p. 264) of this important species, the following brief redescription is given for the benefit of future students of the family.

Male. 1.54 mm. long by 0.67 mm. wide.

Dark brown with elytra, apical margins of tergites, antennae, palpi and legs paler. Strongly shining, subglabrous, with the pubescence minute (0.01 to 0.03 mm. long), very sparse; head and pronotum minutely but distinctly punctulate.

Head with coarsely-faceted eyes of moderate size (twice as long as tempora), with an evenly, gently convex vertex. A pair of large, pubescent vertexal foveae on a line through eye-centers; each vertexal fovea with the diameter of two ocular facets. Front evenly declivous, merging into the simple, steeply declivous clypeus; a median frontal fovea far down on the front, between the antennal tubercles, this fovea also pubescent and nearly as large as the vertexal foveae. Mandibles large, each with a conspicuous, acute-triangular tooth on the external face near base.

Antennae eleven-segmented, very abnormal (Pl. II, 8), 0.83 mm. long; segment I elongate, with dorsal face suddenly tumid in apical half; II elongate, shorter than first; III small, obconical; IV transversemoniliform; V transverse, larger than fourth; VI large, twice as long as fifth, with the entire ventral face foveate; VII and VIII very short, very transverse; IX large, transverse, with mesial face much longer than lateral face, and ventral face with an irregular, excentric excavation; X larger than any other segment, elongate, with ventral face bearing a deep sinuous, setose fossa; XI nearly as wide as, but shorter than, tenth, rounded-triangular, with a circular fovea at base of ventral face.

Pronotum with a circular, pubescent fovea on each side; and a much smaller, nude, elongate, fovea at middle of base.

Elytra with simple flanks; each elytron trifoveate; the inner at origin of an entire sutural stria; the median free; the outer at base of a short discal impression.

Abdomen with five tergites and five sternites. First tergite with a pair of very short discal carinae, one-sixth the tergite length, and separated by less than one-third the total abdominal width. Sternites medianly flattened to slightly concave.

Intermediate coxae each with a spine at mesial angle; intermediate trochanters each with a short median spine.

This description is based on a male collected at light on the night of August 28, 1938 by L. J. Lipovsky at Acapulco, Guerrero, and hence becomes a member of the Pacific coastal fauna of Mexico.

Reichenbachia reichei has one of the longest ranges known for neotropical pselaphids. It was originally reported from Colombia and Guatemala (Schaufuss, 1872), again by Sharp (1887) from Guatemala, and now it is known from Guerrero, Mexico.

The statement made quite generally, in generic keys and diagnoses, that *Reichenbachia* has contiguous intermediate coxae (Raffray 1904, 1908; Bowman, 1934; Park, 1942), is not an absolute criterion. *Reichenbachia reichei* has the intermediate coxae subcontiguous, with the mesosternal and metasternal laminae clearly discernible between these coxae as narrow processes. This fact should be taken into account in future keys to the tribe Brachyglutini, since *reichei*, and possibly other species of its genus, would not key out. For example *reichei* would run to couplet 25 in my key to neotropical brachyglutine genera (Park, 1942, p. 126). The following expansion of this couplet will serve to differentiate the three genera involved:

The small collection of Acapulco pselaphids discussed here is of zoögeographic importance. Previously a single species—*Jubus punctatus* (Sharp), also from Acapulco—was known with certainty from the Pacific Slope of Mexico. The present data bring the number to nine

### Table I

#### MEXICAN PACIFIC COAST PSELAPHIDS

Acapulco Fauna

Jubus punctatus (Sharp) Reichenbachia mexicana Raffray

R. bifoveata Fletcher R. reichei (Schaufuss)

Decarthron fractifrons Fletcher

D. punctatum Fletcher

D. sandersoni Park
D. lipowskyi Park

D. profemoralis Park

Nearest known locality

None

None Veracruz, Veracruz

Veracruz, Veracruz

Colombia and Guatemala Veracruz, Veracruz

None None

None

species, out of 134 known from Mexico. This is a pitiful showing, especially since all nine are known only from one locality on the Pacific side, and two of the three genera are especially prevalent at lights at night. A great deal of lateral coastal collecting is necessary, particularly of those species not flying to lights.

The following two keys, to genera and to species, cover the Mexican pselaphid fauna in so far as this has been reported in the literature. In this respect they may be considered as tentative and incomplete since they represent a small portion of the total potential fauna, largely undescribed or composed of species known from other parts of the neotropics and unrecorded for Mexico. In another respect these keys serve the initial purpose of covering available records, and form the preliminary step towards a detailed report on Mexican pselaphids now being undertaken by the author.

## KEY TO THE GENERA OF MEXICAN PSELAPHIDAE

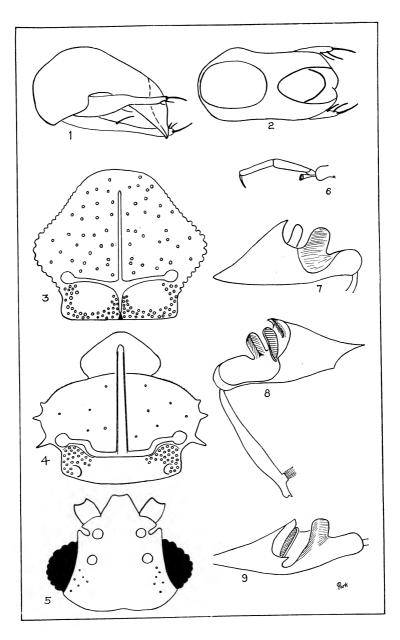
1		Antennae with apparently two (in reality with three) segments; always in the nests of ants
2	(1)	Antennae with six segments
3	(2)	Antennae with nine segments
4	(3)	Antennae with ten segments
5	(4)	Ventral surface of head with a large, median, oval fossa or fovea with sharply carinated borders
6	(5)	Third (next to last) segment of maxillary palpi much longer than wide
7	(4)	Tarsi with the first two segments very small and the third relatively very large
8	(7)	Third tarsal segment bearing a pair of long, equal arcuate claws

9 (7)	Trochanters of intermediate legs relatively long, apically clubbed or inflated, with the femora inserted at the distal face so that the respective coxa and femur are relatively distant
	Trochanters of intermediate legs with the femora very obliquely articulated, so that the respective coxa and femur are relatively approximate
10 (9)	Internal or mesial face of fourth (last) segment of the maxillary palpi with a longitudinal sulcus; pubescence never squamose
11 (10)	Last two segments of maxillary palpi longer than wide
12 (11)	Last segment of maxillary palpus with apical face rounded and lacking a terminal palpal cone (not to be confused with appendage of the external face)Pilopius.  Last segment of maxillary palpi with apical face angulate, with apex bearing a terminal palpal cone (in addition to appendage of external face)
13 (9)	
14 (13)	Ventral surface of head with two oblique, converging, sharply-defined carinae in a V or Y pattern
15 (14)	Head anteriorly truncate, with the antennae distant from each other at their bases
16 (14)	Ventral surface with an oblique lateral sulcus on each side and a median longitudinal sulcus
17 (13)	Prosternum with a median longitudinal carina
18 (17)	Each elytron with three basal foveae

#### PLATE I

- 1. Hamotus fletcheri Park. Aedeagus, lateral view.
- 2. Hamotus fletcheri Park. Aedeagus, dorsal view. Both this and the first figure drawn from Colombian material at 400 diameters, balsam mount, and checked against paratype from the Canal Zone both balsam mount, and glycerine stock.
- 3. Pronotum of Rhexidius gerhardi Park, type male.
- 4. Pronotum of Rhexius sharpi Park, type male.
- 5. Dorsal surface of head of *Decarthron bolivari* new species, holotype male.
- 6. Decarthron bolivari new species, anterior tarsus.
- 7. Decarthron bolivari new species, holotype male intermediate femur, anterior face.
- 8. Decarthron bolivari new species, holotype male intermediate femur and tibia, posterior face.
- 9. Decarthron bolivari new species, holotype male intermediate femur, dorsal face.

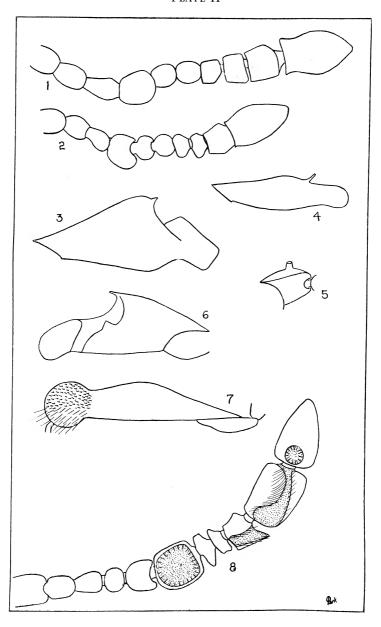
PLATE I



#### PLATE II

- 1. Decarthron uveum new species, type male, antenna (0.70 mm. long).
- 2. Decarthron rudigenus new species, type male, antenna (0.57 mm. long).
- 3. Decarthron uveum new species, type male, intermediate femur, anterior face.
- 4. Decarthron rudigenus, new species, type male, intermediate femur, anterior face. (Fig. 3 and 4 drawn to same scale as 1 and 2 of Pl. II and Fig. 3 to 9 of Pl. I).
- 5. Decarthron fractifrons Fletcher. Three-quarter view of first antennal segment, with tubercle on ventral face, and basal articulation of second segment.
- 6. Decarthron lipovskyi new species, holotype male. Posterior face, intermediate femur and trochanter. Femur 0.40 mm. long x 0.14 mm. high.
- 7. Decarthron profemoralis new species, holotype male. Anterior face, anterior femur, trochanter, coxal articulation and base of tibia. Femur 0.47 mm. long x 0.10 mm. high.
- 8. Reichenbachia reichei (Schaufuss). Ventral face of antenna. Stippled areas indicate foveae or excavations.

PLATE II



19 (1	7) Base of each elytron with the humeral angle abruptly produced as a large callus; body large (2 mm. or more in length) and globular
20 (1	· ·
21 (2	
22 (2	<ol> <li>Pronotal disc simply convex, and without a median discal fovea or median longitudinal sulcus</li></ol>
23 (2	2) Each elytron with two basal foveae; front prolonged into a conspicuous antennal rostrum, with antennae subcontiguously articulated at distal end; vertex and genae with complex, tortuous sulci
24 (2	_ 1
25 (2	
26 (2	
27 (2	
28 (2	7) Abdomen with only five sternites visible (the true morphological first sternite being covered by the posterior coxae); pronotum with neither lateral nor median basal foveae nor transverse sulcus
	long or longer than the posterior coxae and fully vis-

		ible from side to side; pronotum always with a well-formed transverse antebasal sulcus
29	(28)	Flanks of elytra either longitudinally sulcate or longitudinally carinate
		Flanks of elytra wholly unmodified, with neither sulci nor carinae
30	(29)	Flank of each elytron with a longitudinal sulcus
		Flank of each elytron with a longitudinal carinaBuris.
31	(29)	Abdomen wholly immarginate, lacking even an external carina at base of first tergite each side
32	(27)	Base of each elytron with either two or three well-formed foveae
		Base of each elytron with either four foveae or with four minute, punctiform replacing points
33	(32)	Base of pronotum with a transverse sulcus
34	(33)	Base of pronotum with a minute, median, punctiform fovea
		Base of pronotum wholly devoid of foveae or foveal impressions (save in two species, inflatus Fletcher and diplorachis Park, in which there is no fovea but a just discernible median impression at basal third)
35	(32)	Base of each elytron with three foveae
36	(35)	Ventral surface of head with capitulate setae
		Ventral surface of head without capitulate setae
37	(36)	Tarsi with a single claw
38	(35)	Dorsal surface wholly glabrous and shining, with no punctures and no pubescence

•	(40)	
39	(38)	Posterior coxae widely separatedReichenbachia (in part). Posterior coxae contiguous or subcontiguous
40	(20)	Second and third tergites highly abnormal in the male
40	(39)	sex (female sex unknown)
		These tergites normal in both sexes
11	(40)	
41	(40)	Flank of each elytron with a spongiose subhumeral fovea; vertex with a pair of spongiose foveae; legs wholly unmodified
		Flank of each elytron lacking a subhumeral fovea; pair of
		vertexal foveae nude; intermediate leg with trochanter
		spined, femur with a median laminoid tooth, tibia with
		a spine at apical three-fourths; posterior trochanters
		spined
42	(40)	Each elytron with a long dorsal (discal) stria which is
•	(10)	sharply defined, nearly entire, extending for three-
		fourths of elytral length
		If discal elytral stria is present, it is short, not more than
		half the elytral length, unusually very much shorter,
		and in the form of an intra-humeral depression
43	(42)	Elytral humeri dentate or denticulate or acutely promi-
		nent
		Elytral humeri may be prominent but never acute or denticulate
44	(43)	Elytral base simply foveate, and without a transverse
		basal carina
		Elytral base with a transverse carina parallel to basal
		elytral margin
45	(43)	Pronotum with lateral foveae invisible from a strictly dorsal viewpoint
		Pronotal foveae wholly or partially visible from a strictly dorsal viewpoint
46	(45)	Head small, triangular, much narrower than the pro-
. •	/	notum
		Head large, much wider than pronotum, with the vertex
		vaultedTrimiopsis.

## KEY TO SPECIES OF PSELAPHIDAE KNOWN FROM MEXICO

1		Antennae of more than six segments	
2	(1)	Antennae with six or fewer segments	
2	(1)	Antennae of either nine or eleven segments	
3	(2)	Ventral surface of head with a median, longitudinal carina Ventral surface of head with a median, oval fossa	4
4	(3)	Apex of distal segment of maxillary palpus meeting the slightly concave internal face in an acute angle, the segment being distinctly wider near apex	
		Apex of distal segment of maxillary palpus meeting the slightly convex internal face in a perfectly rounded non-angulate contour, the segment being distinctly wider near middle	her
5	(3)	Third (penultimate) segment of maxillary palpus much longer than wide, subconical-ovate Euteleia nodosa Raffi Third (penultimate) segment of maxillary palpus transverse, subtriangular	-
6	(2)	Antennae of nine segments	
		Bythinoplectus denticornis Raffi Antennae of eleven segments	ray. 7
7	(6)	Tarsi with first segment small and next two relatively	'
•	(0)	very large	8
		Tarsi with first two segments small and third relatively very large	98
8	(7)	Trochanters of intermediate legs with the femora very obliquely articulated, so that respective coxa and femur are relatively near each other	9
		Trochanters of intermediate legs with the femora articulated at their distal, inflated face, so that respective coxa and femur are relatively distant	71
9	(8)	Mentum very wide, covering mouth and other mouth- parts in great part; base (cardo) of each maxilla ex- tended obliquely on outer face into a long projection	10
		Mentum normally small; bases of maxillae not extended on lateral face	
10	(9)	Ventral surface of head with two oblique, converging carinae which form a Y or a V patternVentral surface of head without such carinae	

<sup>&</sup>lt;sup>1</sup>In these two species the males have six visible sternites; the females have five visible sternites.

22 (21)	
	wide as IX
	distinctly narrower than IXThesium sharpi (Raffray).
23 (20)	Front prolonged into a conspicuous rostrum, with sub-
(/	contiguously articulated antennae; vertex and genae
	with complex sulci
	Front and vertex not as described 100
24 (19)	Posterior coxae with mesial faces conically produced for
<b>3</b> . (1))	their trochantal articulation
	Posterior coxae with mesial faces globular to triangularly
	produced for their trochantal articulation
25 (24)	Each elytron with a long, sharply defined, nearly entire
23 (21)	dorsal stria, extending for three-fourths of the elytral
	lengthTomoplectus cordicollis Raffray.
	Elytral dorsal striae absent or short, never more than half
	the elytral length
26 (25)	Elytral humeri acute to dentate
20 (23)	Elytral humeri prominent or obsolete, but never in an
	acute angle or dentate
27 (26)	Base of each elytron simply bifoveate
21 (20)	
	Base of each elytron with a transverse basal carina above
	the two basal foveae, parallel with basal margin
28 (24)	Elytral base with neither foveae nor minute replacing
_ (,	punctiform points
	Elytral base with two, or three, or four foveae, or with
	minute punctiform replacing points, on each elytron 35
29 (28)	First sternite very short, hardly visible, and never as long
<b>-</b> ) ( <b>-</b> 0)	as posterior coxae
	First visible sternite long, as long as, or much longer than,
	posterior coxae and clearly visible from side to side 30
30 (29)	Each elytral flank with a longitudinal sulcus
00 (2))	Each elytral flank either perfectly simple, or longitud-
	inally carinate but not longitudinally sulcate
31 (30)	Antennal segment II quadrate, III moniliform, IV-V
31 (30)	slightly transverse, VI-VII transverse-crescentric with
	internal faces subserrate, VIII-IX very transverse with
	internal faces produced
	Bythiniphysis venustulus (Schaufuss).
	Antennal segment II briefly ovate, III-VII moniliform
	but progressively narrower, VIII-IX wider and lentic-
	ular
	uiui (Ituliu) (

32	(30)	Elytral flank simple, not longitudinally carinate
33	(32)	Abdomen wholly immarginate, lacking even an external carina at base of first tergite on sides
		Abdomen with first tergite narrowed, and with a margin formed by an external and an internal carina on each side
34	(21)	Pronotal disc with a small subapical fovea
		Pronotal disc with a large, elongate-oval foveoid impression which is narrowed at both ends and isolated  Thesium paraobscurus Park <sup>2</sup> .
35	(28)	Base of elytron with either four distinct foveae, or with four minute, punctiform replacing points
36	(35)	Pronotum with a transverse antebasal sulcus
37	(36)	Elytron with a prominent humeral callus
38	(36)	Intermediate coxae subcontiguous, the mesosternum visible between them as an acutely pointed and narrow lamina
20	(20)	process of the metasternum
39	(38)	Antennal segment XI elongate, simple, in both sexes, this segment at most narrowed lateromesially and sinuate on ventral face in apical third
		Antennal segments IX, X, XI very abnormal in the male sex
40	(39)	Antennal segment XI obliquely, arcuately truncate at base, this obliquity paralleling the convex, arcuate apical margin of segment X, so that XI has an acutely pro-

<sup>&</sup>lt;sup>2</sup>Thesium obscurus (Sharp) was described from Guatemala and may occur in Mexico, although it has not been so reported. Sharp's species may be differentiated by the elongate discal fovea being broadest at the rounded apical end, and by its long tempora, as long as the eyes, whereas paraobscurus has both ends of the pronotal discal fovea acute and widest at middle, and short tempora, about one-third the length of the eyes.

		duced basal-external angle; female with a simply ovate distal antennal segmentScalenarthrus obliquus Raffray. Antennal club abnormal but not as above
41	(40)	<sup>3</sup> Vertexal foveae free, wholly unconnected with the transverse frontal sulcusScalenarthrus cavicornis (Raffray).
		Vertexal foveae connected with transverse frontal sulcus by a fine, shallow, arcuate, inter-foveal sulcus
42	(41)	Antennal segment XI nearly as long as preceding six segments united, its baso-external angle slightly produced and the entire surface excavated save for an elongate area at mesioapical face
		Scalenarthrus inflatus Fletcher.
		Antennal segment XI transversely excavated, the excavation occupying basal third, and with a distinct subbasal tooth
43	(35)	Integument shining and glabrous, wholly devoid of either punctures or pubescence on dorsal surface
		Integument shining or opaque, but always with punctures and pubescence, although the punctures may be minute and the setae short and sparse
44	(43)	Posterior coxae slightly oblique mesially, allowing the metasternum to appear between them as a truncate edge, and the coxae thus slightly separated
		Posterior coxae not mesially oblique, the metasternum appearing as a minute, obtuse point between, with the coxae practically contiguous
4 ~	(44)	Eupsenius grouvellei Raffray.
45	(44)	Antennal segment IX as long as XEupsenius mexicanus Raffray.
		Antennal segment X twice as long as IX
46	(43)	Pronotum with a transverse antebasal sulcus
47	(46)	Thick, globular body; humerus of elytron swollen into a distinct callus
		Elongate-cylindrical body; elytral humeri not elevated in callosities
48	(47)	<sup>4</sup> Antennae abnormal in the male
	( /	Antennae normal in the male

<sup>&</sup>lt;sup>3</sup>Two species of Mexican Scalenarthrus (separabilis and adparatus) described by Schaufuss are not taken care of in this key.

<sup>&#</sup>x27;In these species the males have six visible sternites and the females have five.

49	(48)	Legs abnormal in the male	50
		Arthmius quadripunctatus (Schaufuss	;).
50	(49)	Antennal segment I abnormal, with mesioapical angle strongly produced as a long flattened tooth	
		Arthmius bubalus Raffra	
		Antennal segment I not as above	
51	(50)	Antennae with intermediate segments forming an arc	
52	(51)	Antennal arc of segments IV to VIII inclusive	
		Antennal arc beginning with segment V	
	(52)	Antennal arc of segments V to IX inclusive	17 54
54	(53)	Antennal segments IV and V subequal in size, the fourth only slightly smaller than fifth	
		Arthmius simplicior Raffra Antennal segment V much larger than IV	
	/E 4 \	-	))
22	(54)	Antennal segment V greatly expanded ventrobasally; VIII expanded ventroapically	
		Arthmius geniculatus Shar Antennal segment V regularly ovate; VIII either minute and very transverse, or submoniliform	
56	(48)	Legs normal in the male sexArthmius punctatus Raffra Legs abnormal in the male sex11	
57	(46)	<sup>5</sup> Head with three foveae: a pair between the eyes, and one between antennal bases or on the declivous front 6	51
		Head with a pair of foveae between the eyes, but the frontal fovea wholly absent	58
58	(57)	Vertex with a medium longitudinal carina or carinoid elevation between vertexal foveae	r.
		Vertex not so carinated	
59	(58)	Each elytron with three basal foveae	
		Each elytron with two basal foveae	

<sup>&</sup>lt;sup>5</sup>Three species of Mexican Reichenbachia are not integrated in this key. These are biocellata (Schaufuss), impunctata (Schaufuss), and obnublia Raffray which is known only from a female specimen.

60	(59)	Male with antennal segment IV slightly shorter than V; elytral discal stria fine and extending beyond middle
		Male with antennal segment IV and V subequal in length; elytral discal stria basally strong, extending to apical fourth of elytral length
61	(57)	Frontal fovea fully as large as, to slightly smaller than, the vertexal foveae; frontal fovea normally placed on the front, or placed on the frontal declivity between the antennal tubercles
		Frontal fovea minute, much smaller than vertexal foveae, and placed on the abruptly declivous front at nearly right angles to the vertexal foveae; male with antennal segments V and VI elongate, with long, irregular spinoid processes from their ventral faces
62	(61)	Male with posterior tibiae swollen externally and with an elongate median depression on the external face  ———————————————————————————————————
63	(62)	Male posterior tibiae neither swollen nor excavated 63 Both sexes with normal antennae
64	(63)	Antennae with segment V only very large, much larger than III or IV; V with the dorsal face polished and subglabrous, the ventral face medianly excavated
		Antennae with at least V and VI very abnormally formed, or segments V to XI abnormal
65	(1)	Antennae of six segmentsListriophorus felix Schaufuss.  Antennae of not more than three segments  Fustiger veracruzensis Park.
66	(64)	Antennal segment V obliquely subpyriform, with apicomesial angle extended; VI transverse with mesial face produced as a slender, acute process or processes; ventral faces of V and VI excavated
		Antennae not as described above124
67	(63)	Each elytron with three basal foveae
68	(67)	Antennae relatively short and thick; known only from the female
		the female Reichenbachia pubescens Schaufuss.

69 (67)	Discal elytral stria long, well-developed, extending more than middle of length of elytra
70 (69)	Antennal segments I and II elongate-cylindrical
71 (8)	Body pubescence in the form of scales
72 (71)	Third and fourth segments of maxillary palpi wider than long, transverse-ovate to transverse-triangular
73 (72)	Distal (fourth) maxillary palpal segment with apical face rounded and lacking a terminal palpal cone
74 (72)	Antennal segment VIII as long as preceding four segments united
75 (71)	Pronotum with three free antebasal foveae
76 (75)	First two tergites subequal in length; male with abnormal posterior tibiae, each bearing a large, elongate, pubescent fovea at center of mesial face
	First tergite distinctly much longer than second
77 (76)	Longitudinal sulcus of internal face of distal segment of maxillary palpi entire, extending from apex to base and dividing the basal margin
78 (77)	Sulcus noted above not entire, not reaching basal margin 78
	moniliform to subquadrate

79 (75	Median pronotal fovea very large, strongly formed, with the transverse sulcus each side seen as a conspicuously narrower groove
	This fovea very small, formed by a slight arcuation of the walls of the transverse sulcus, or the fovea wholly absent
80 (79)	Lateral pronotal margins tuberculate and sinuate above lateral foveae, these foveae incising the lateral margins  Hamotus nodicollis Raffray.
	Lateral pronotal margins simple, the antebasal foveae not incising the margins
81 (80)	Antennal segment X longer than wide; elytral intra- humeral impression very broadHamotus electrae Park. Antennal segment X wider than long; elytral intra- humeral impression strioidHamotus monachus Reitter.
82 (79)	
83 (82)	
84 (83)	Body pubescence light yellow to reddish-gold 84 Antennal segment IX quadrate; X obconical, much longer than wide; XI briefly, regularly ovoidal
	Hamotus suturalis Schaufuss.  Antennal segment IX slightly elongate; X slightly elongate with an arcuate tooth at center of ventroexternal face; XI with a poroid tubercle at apicointernal face and a spicular tooth at center of ventroexternal face  Hamotus veracruzensis Park.
85 (5)	
` /	Pronotum with a single fovea, the median
86 (85)	Front more or less truncate; clypeus (epistome) armed
	Front more or less declivous; clypeus simple
87 (85)	Antennae abnormal in the male
	Antennae normal in both sexes
88 (87)	duced at middle in a truncated process
	Decarthron rugulosum Fletcher.
	Antennal segment not as above

<sup>&</sup>lt;sup>6</sup>Two species of Mexican Decarthron (curticorne and denticorne) described by Schaufuss are not taken care of in this key.

89	(88)	Antennal segment III relatively large, obtusely prominent mesially, longer than any other segment save X  Decarthron punctatum Fletcher.
		Antennal segment III never longer than IX
90	(89)	Antennal segment VIII quadrate to transverse, lateral
90	(0)	face never produced, mesial face may or may not be produced
		Antennal segment VII transverse, lateral face much
		larger than mesial face and produced, very obliquely truncate at apex
91	(90)	Antennal segment VII with mesial or mesiodorsal face produced
		Antennal segment VII with mesial or mesiodorsal face
		not produced92
92	(91)	Male intermediate femora evenly swollen on dorsal face, this face slightly emarginate with the edge bidentate and a recurved, narrow sulcus below this emarginated
		edge
		of dorsal face, this dilation bearing at dorsal apex an
		apically directed spine and a broadly semilunar exca-
		vation; apical fourth of femur with a sudden annular
		constriction
93	(87)	All antennal segments much longer than wide
		Decarthron gracilicorne Fletcher.
		Antennal segments not all longer than wide
94	(93)	Intermediate segments cylindrical to obconical
		Intermediate segments globular, or ovate
95	(94)	Antennal segments III, IV, V much longer than wide
		Decarthron restitutum Sharp.
		Antennal segments III, IV, V, VI much longer than wide
		Decarthron fallaciosum Sharp.
		Decarthron planifrons Raffray.
		Decarthron suturale (Schaufuss).
		Decarthron tropicum Fletcher.
96	(94)	Intermediate antennal segments globular, not longer than wide
		These segments ovoidal, longer than wide
97	(96)	Male intermediate femora with the excavation having the
		apical edge erected into a blunt, recurved tooth
		Decarthron denticulatum Fletcher.
		This excavation with no apical tooth
		Decarthron schmitti Raffray.

98 (7)	Tarsi with two large, equal, elongate-arcuate claws  Megarafonus fundus Park.
99 (26)	Tarsi with only one claw
	carina
400 (00)	Prosternum without such a carina
100 (23)	
101 (100)	Each elytron with four basal foveae
101 (100)	First three tergites with a pair of basal carinae which bound a median transverse impression; male with seven, female with six, sternites
	First two tergites with a pair of basal carinae which bound a median transverse impression; male with seven, female with six, sternites
102(100)	Pronotum with a small, subapical lobe and a large basal
	lobe; the subapical lobe is pedunculate, and acts as a bearing for the slender neck
	Pronotum lacking such a pedunculate subapical lobe103
103 (102)	Lateral pronotal margins subentire, save for minute
	granulation in basal third; both sexes with six sternites;
	male fourth tergite simple
	Fletcherexius macrodactylus (Fletcher).
	Lateral pronotal margins very coarsely crenulated; fe- male with six, male with seven, sternites; fourth ter-
	gite medianly depressed at base, with a conical tubercle
104 (99)	arising from this excavation
104 (99)	ly dorsal viewpoint
	Pronotal lateral antebasal foveae wholly or partially visi-
	ble from a dorsal viewpoint
105 (104)	Head small, triangular, distinctly narrower than pro-
,	notum
	Head large, with vaulted vertex, and much wider than
	pronotumTrimiopsis femoralis Sharp.
106(104)	All body integuments, save mesosternal area, densely granulated
	Body integuments not granulated107
107(106)	Intrahumeral elytral impression absent or not more than one-fourth the elytral length, ovoidal to cuneiform but never sulciform
	Intrahumeral elytral impression subsulciform or strioid,
	very long, one-half the elytral length
	Melha montuosa Park

108(107)	Males (seven sternites) with all femora uninflated; third sternite tuberculate on each sideMelba minuta (Sharp). Males (seven sternites) with anterior and middle femora strongly inflated, the anterior with glabrous ventral face which is flattened and bears three sensory pores; the middle femora with ventral face sinuate; third sternite simple
109 (15)	Flank of elytra with a subhumeral fovea; male distal sternite large and subcircularAllobrox dampfi Fletcher. Flank of elytra with no subhumeral fovea; male distal sternite minute, less than half the length of sixth (penultimate) and transversely fusiform
110 (32)	Seven sternites, the last longitudinally divided (males)112 Six sternites, the last undivided (females)111
111(110)	Last tergite never produced into a spine
	Last tergite produced into a spine, which may be long or short, but is acute
112(110)	Posterior tibiae strongly arcuate in distal half, with a tooth at basal end of arcuation
113(112)	A flavous-topped, drum-shaped tumulus on each side of the ventral surface of prothorax, on a line between the anterior coxal cavity and the anterolateral angle of the pronotum
114(113)	Flank of each elytron with a longitudinal carina which ends simply near humerus
	Buris brevicollis brevicollis (Sharp). Flank of each elytron with a longitudinal carina which ends in a strong subhumeral fovea
115(113)	Antennal segment X strongly pedunculate at base, and broadly produced in apical two-thirds
	Antennal segment X transverse, normally truncate at base, and not produced apically or pedunculate

116 (39)	First tergite with two thin, short basal carinae separated by one-fourth the segmental width
	Scalenarthrus subcarinatus Raffray.
	First tergite with no basal carinae
	Scalenarthrus diplorachis Park.
117 (53)	Posterior trochanters very large, concave behind with the concavity densely setose; segments of antennal arc more or less normal
	Posterior trochanters normal; antennal segment IX very abnormal, in the form of an asymmetrically articulated irregular parallelogramArthmius asymmetricus Park.
118 (55)	Antennal segment VII very large, arcuate-triangular with ventroapical angle acute; VIII minute, transversely oblong; fifth sternite with a wide, shallow, relatively simple excavation Arthmius pedestrianus Raffray.
	Antennal segment VII normally elongate-oval; VIII normally submoniliform, larger than seventh; fifth sternite with a basal concavity and a large, laminoid spine with recurved apex
119 (56)	<sup>7</sup> Anterior tibiae nearly entirely dilated on external face, this dilation slightly rounded and flattened
	Anterior tibiae with dorsoanterior face gradually swollen from base to apical three-fourths where it is suddenly cusped and then excavated in remaining apical fourthArthmius plurispinosus Park.
120 (78)	Antennal segment XI as long as five preceding segments united; antennal tubercles separated narrowly by a relatively deep sulcus with subvertical walls
	Antennal segment XI as long as three preceding segments united; antennal tubercles small, relatively distant, and separated by a broad, shallow, longitudinal impression with strongly sloping walls

<sup>&</sup>lt;sup>T</sup>Arthmius simplicicornis (Sharp), described from Guatemala, may occur in Mexico but has not been so recorded. Sharp's species has a quadrate head the vertex of which is flattened and bears, in addition to the two vertexal foveae, a pair of interantennal foveal impressions more or less connected by a transverse sulcus, and the trochanters are simple in the male. Plurispinosus has the vertex strongly convex and bifoveate, and lacks any interantennal foveal impressions or transverse frontal sulcus, while the intermediate trochanter, femur, and tibia are spined.

121 (91)	Antennal segment VI ovate and subequal in width to IV and V; male with intermediate femora having both apical and basal edges of the excavation armed with a spine
122 (96)	Males with the anterior femora simple save in distal fourth of length where it is suddenly dilated into a circular, tumid, granulated, finely setose area on the anterior face; intermediate femora simple
	mediate femora very abnormal
123(122)	Male intermediate femora having the excavation armed basally by a spine, and apically the carinoid dorsal ridge of excavation suddenly erected in an irregular angulated process, with the ventral limit of the excavation on the posterior face simple
	Male intermediate femora having the excavation armed basally by a spine, but the carinoid dorsal ridge of the excavation is simple, while the ventral limit of the excavation on the posterior face bears a laminoid triangular process nearly beneath the basal spine
124 (66)	Antennal segment V elongate, twice as long as wide, its ventral face polished and excavated; VI large, half as long as V, as wide as longReichenbachia sallaei (Sharp).  Antennae with segments V to XI inclusive abnormal (Pl. II, 8)Reichenbachia reichei (Schaufuss).

#### ABSTRACT

The following new species of neotropical pselaphids are described and integrated: Decarthron (Decarthron) uveum (Brazil), rudigenus (Brazil), bolivari (Colombia), profemoralis (Mexico), sandersoni (Mexico), lipovskyi (Mexico).

Six species of neotropical pselaphids, not recorded since their original description, are reported from new localities.

The pselaphid fauna of the Pacific Slope of Mexico is discussed. Provisional keys to genera and species of Mexican pselaphids are presented.

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